



DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES (RER)  
BOARD AND CODE ADMINISTRATION DIVISION

MIAMI-DADE COUNTY  
PRODUCT CONTROL SECTION  
11805 SW 26 Street, Room 208  
Miami, Florida 33175-2474  
T (786) 315-2590 F (786) 315-2599

[www.miamidade.gov/economy](http://www.miamidade.gov/economy)

## NOTICE OF ACCEPTANCE (NOA)

Efficient Building Systems, LLC  
2121 Whitfield Park Loop  
Sarasota, Florida 34243

### SCOPE:

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed and accepted by Miami-Dade County RER- Product Control Section to be used in Miami Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami-Dade County Product Control Section (In Miami Dade County) and/or the AHJ (in areas other than Miami Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. RER reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Section that this product or material fails to meet the requirements of the applicable building code.

This product is approved as described herein, and has been designed to comply with the High Velocity Hurricane Zone of the Florida Building Code.

### DESCRIPTION: Composite Wall Panel System

**APPROVAL DOCUMENT:** Drawing No. 07CS-0519, titled "Structural Concrete Form", sheets S-1, S-2, and S-3, prepared by Karins Engineering Group, Inc., dated June 19, 2014, signed and sealed by John F. Bonacci, P.E., on June 26, 2014, bearing the Miami-Dade County Product Control Revision stamp with the Notice of Acceptance number and the expiration date by the Miami-Dade County Product Control Section.

### MISSILE IMPACT RATING: Large and Small Missile Impact Resistant

**LABELING:** Each panel shall bear a permanent label with the manufacturer's name or logo, city, state and the following statement: "Miami-Dade County Product Control Approved", unless otherwise noted herein.

**RENEWAL** of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

**TERMINATION** of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

**ADVERTISEMENT:** The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

**INSPECTION:** A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This NOA revises & renews NOA #08-0512.16 and consists of this page 1, evidence submitted pages E-1 & E-2 as well as approval document mentioned above.

The submitted documentation was reviewed by **Helmy A. Makar, P.E., M.S.**



*Helmy A. Makar*  
08/21/2014

NOA No. 13-0402.05  
Expiration Date: 06/26/2018  
Approval Date: 08/21/2014  
Page 1

**NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED**

**1. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL #03-0114.10**

**A. DRAWINGS**

1. *Drawing No. KK2090.00, titled "E-Wall", sheets 1 through 3 of 3, prepared by LZA Technology, dated January 10, 2003, last revision #2 dated June 4, 2003, signed and sealed by John W. Knezevich, P.E.*

**B. TESTS**

1. *Test report on Large Missile Impact Test, Cyclic Wind Pressure Test, and Uniform Static Air Pressure Test on E-Wall Composite Wall Panel Systems, prepared by Certified Testing Laboratories, Report No. CTLA-964W, dated December 11, 2002, signed and sealed by Ramesh Patel, P.E.*

**C. CALCULATIONS**

1. *Calculations titled "E-Wall /3-5/8" Composite Wall", pages 1 through 9 of 9, dated 01/10/2003, prepared by LZA Technology, signed and sealed by John W. Knezevich, P.E.*
2. *Calculations titled "Efficient Wall System", pages 1 through 4 of 4, dated May 23, 2003, prepared by LZA Technology, signed by Zoran, P.E.*
3. *Calculations titled "E-Wall Structural Properties", pages 1 & 2 of 2, dated May 29, 2003, prepared by LZA Technology, signed and sealed by John W. Knezevich, P.E.*

**D. MATERIAL CERTIFICATIONS**

1. *Spec. Data issued by R. H. Construction Services, dated December 18, 2002, with compression data of concrete.*
2. *Tensile Test Report No A964W, prepared by Certified Testing Laboratories, dated December 06, 2002, signed and sealed by Ramesh Patel, P.E.*

**2. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL # 08-0512.16**

**A. DRAWINGS**

1. *Drawing No. 07CS-0519, titled "Structural Concrete Form", sheets S-1, S-2, and S-3, prepared by Karins Engineering Group, Inc., dated May 05, 2008, last revision #1 dated June 4, 2008, signed and sealed by John F. Bonacci, P.E.*

**B. TESTS**

1. *None.*

**C. CALCULATIONS**

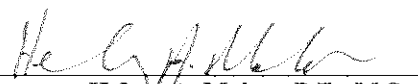
1. *Calculations titled "Structural Concrete Forms", 12 pages, prepared by Karins Engineering Group, Inc., dated 05/05/2008, signed and sealed by John F. Bonacci, P.E.*

**D. QUALITY ASSURANCE**

1. *By Miami-Dade County Building Code Compliance Office.*

**E. MATERIAL CERTIFICATIONS**

1. *None.*

  
Helmy A. Makar, P.E., M.S.  
Product Control Unit Supervisor  
NOA No. 13-0402.05  
Expiration Date: 06/26/2018  
Approval Date: 08/21/2014

**Efficient Building Systems, LLC**

**NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED**

**3. NEW EVIDENCE SUBMITTED**

**A. DRAWINGS**

1. *Drawing No. 07CS-0519, titled " Structural Concrete Form ", sheets S-1, S-2, and S-3, prepared by Karins Engineering Group, Inc., dated June 19, 2014, signed and sealed by John F. Bonacci, P.E., on June 26, 2014.*

**B. TESTS**

1. *Test report on Large Missile Impact Test and Cyclic Wind Pressure Test on E-Wall Composite Wall Panel Systems, prepared by Certified Testing Laboratories, Report No. CTLA-3013W, dated June 02, 2014, signed and sealed by Ramesh Patel, P.E.*

**C. CALCULATIONS**

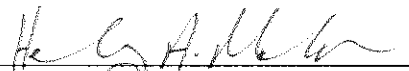
1. *None.*

**D. QUALITY ASSURANCE**

1. *By Miami-Dade County Department of Regulatory and Economic Resources.*

**E. MATERIAL CERTIFICATIONS**

1. *Evaluation Report issued by Karins Engineering Group, Inc., dated March 25, 2013, signed and sealed by John F. Bonacci, P.E., on March 25, 2013, certifying compliance with FBC, 2010 Edition.*



Helmy A. Makar, P.E., M.S.  
Product Control Unit Supervisor  
NOA No. 13-0402.05  
Expiration Date: 06/26/2018  
Approval Date: 08/21/2014

GENERAL NOTES:

1. THESE PRODUCT EVALUATION DOCUMENTS REPRESENT A COMPOSITE WALL PANEL COMPONENT DESIGNED AND TESTED IN ACCORDANCE WITH THE PROVISIONS FOR THE HIGH VELOCITY HURRICANE ZONE (HVHZ) OF THE FLORIDA BUILDING CODE 2010. THIS PRODUCT MEETS LARGE MISSILE IMPACT REQUIREMENTS.
2. THE DESIGN CRITERIA PROVIDED DO NOT INCLUDE THE USE OF A 33% ALLOWABLE STRESS INCREASE WHEN DESIGNING WITH THIS COMPOSITE WALL COMPONENT.
3. THESE PRODUCT EVALUATION DOCUMENTS ARE PREPARED BY THE PRODUCT ENGINEER AND ARE GENERIC. THEY DO NOT INCLUDE INFORMATION PREPARED FOR A SPECIFIC SITE.
4. ALTERATIONS OR ADDITIONS TO THIS DOCUMENT ARE NOT PERMITTED.
5. THESE PRODUCT EVALUATION DOCUMENTS SHALL COMPLY WITH CHAPTER 61G15-23 OF THE FLORIDA ADMINISTRATIVE CODE.
6. THESE DOCUMENTS PROVIDE SPECIFIC STRUCTURAL PROPERTIES FOR USE BY THE DESIGN PROFESSIONAL. WHERE STRUCTURAL PROPERTIES ARE NOT ADDRESSED, THE DESIGN PROFESSIONAL SHALL DESIGN THE ELEMENTS IN ACCORDANCE WITH THE FLORIDA BUILDING CODE. WHERE COMBINATIONS OF STRUCTURAL PROPERTIES ARE REQUIRED, THE DESIGN PROFESSIONAL SHALL DETERMINE THE APPROPRIATE INTERACTION EQUATIONS TO THE DESIGN VALUES PRESENTED HEREIN.
7. THESE PRODUCT EVALUATION DOCUMENTS ARE ONLY FOR USE BY A LICENSED ENGINEER OR ARCHITECT ACTING AS A DELEGATED ENGINEER IN ACCORDANCE WITH THE FLORIDA ADMINISTRATIVE CODE, CH. 61G15-36.003(3). THE DELEGATED ENGINEER SHALL NOT BE REQUIRED TO SUBMIT DELEGATED ENGINEERING DOCUMENTS TO THE PRODUCT ENGINEER AS THE DELEGATED ENGINEER IS WHOLLY RESPONSIBLE FOR THE SPECIFIC USE OF THE COMPOSITE WALL SYSTEM AND SHALL BE THE ENGINEER OF RECORD FOR ANY APPLICATION OF THE COMPOSITE WALL SYSTEM.
8. THIS COMPOSITE WALL PANEL SYSTEM HAS NOT BEEN TESTED FOR AIR AND WATER INFILTRATION. AIR AND WATER INFILTRATION SHALL BE ADDRESSED ON SITE SPECIFIC APPLICATIONS WITH CODE APPROVED FINISHES.
9. COMPOSITE WALL PANEL SHALL BE PERMANENTLY LABELED IN A VISIBLE MANNER AS FOLLOWS:

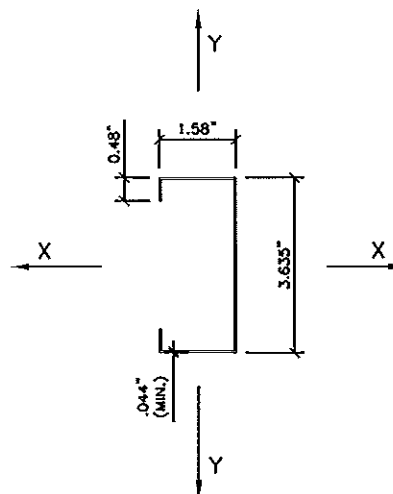
EFFICIENT BUILDING SYSTEMS, LLC  
SARASOTA, FLORIDA  
MIAMI-DADE COUNTY PRODUCT CONTROL APPROVED

COMPOSITE WALL STRUCTURAL SPECIFICATIONS:

10. METAL STUDS SHALL BE COLD-FORMED STEEL COMPLYING WITH ASTM A-653, STRUCTURAL QUALITY, GRADE 33 GALVANIZED WITH A MINIMUM G60 FINISH AND A MINIMUM GALVANIZED METAL THICKNESS OF 0.044 INCHES.
11. CONCRETE SHALL BE NORMAL WEIGHT CONCRETE WITH A MINIMUM COMPRESSIVE STRENGTH,  $f'_c = 3000$  PSI AT 28 DAYS.
12. CONCRETE REINFORCEMENT SHALL COMPLY WITH ASTM A615 GRADE 60.
13. PROVIDE COVER TO ALL WALL REINFORCING ABOVE GRADE AND BELOW GRADE AS PER THE CURRENT ACI CODE.

DRAWING INDEX:

S-1 STRUCTURAL NOTES  
S-2 WALL DETAILS  
S-3 WALL PROPERTIES



(SEE NOTE 10)

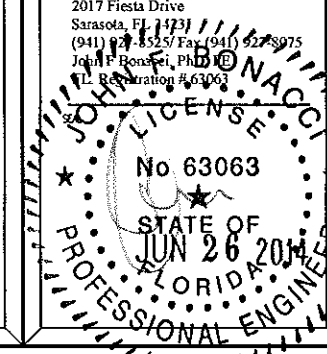
3-5/8" STEEL STUD  
SCALE: 3" = 1'-0"

Area = 0.333 in<sup>2</sup>  
Moments of inertia = X: 0.70086279 in<sup>4</sup>  
Y: 0.11902795 in<sup>4</sup>

PRODUCT REVISED  
as complying with the Florida  
Building Code  
Acceptance No. 13-0402.05  
Expiration Date 06/26/2018  
By *[Signature]*  
Miami Dade Product Cont.

**K** Karins  
Engineering  
Group, Inc.

FL Cert. of Auth. # 8371  
2017 Fiesta Drive  
Sarasota, FL 34231  
(941) 557-8525 / Fax (941) 557-8975  
John F. Bonacci, P.E.  
FL Registration # 63063



Drawn: KC  
Checked: JB  
KES Ref: 07CS-0519  
Scale: AS NOTED  
Date: 06/19/2014

Sheet No:

S-1

Project Name:

STRUCTURAL CONCRETE FORM  
EFFICIENT BUILDING SYSTEMS, LLC  
2121 WHITFIELD PARK LOOP  
SARASOTA, FL 34243

Sheet Description:

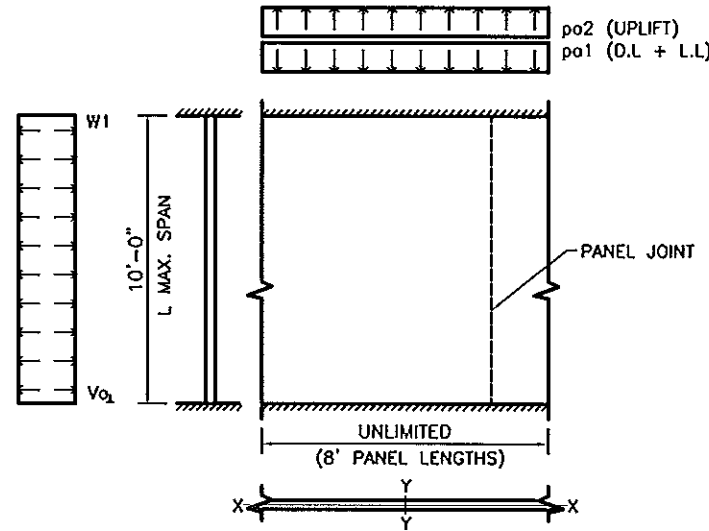
GENERAL NOTES



# STRUC. CONC. FORM STRUCTURAL PROPERTIES

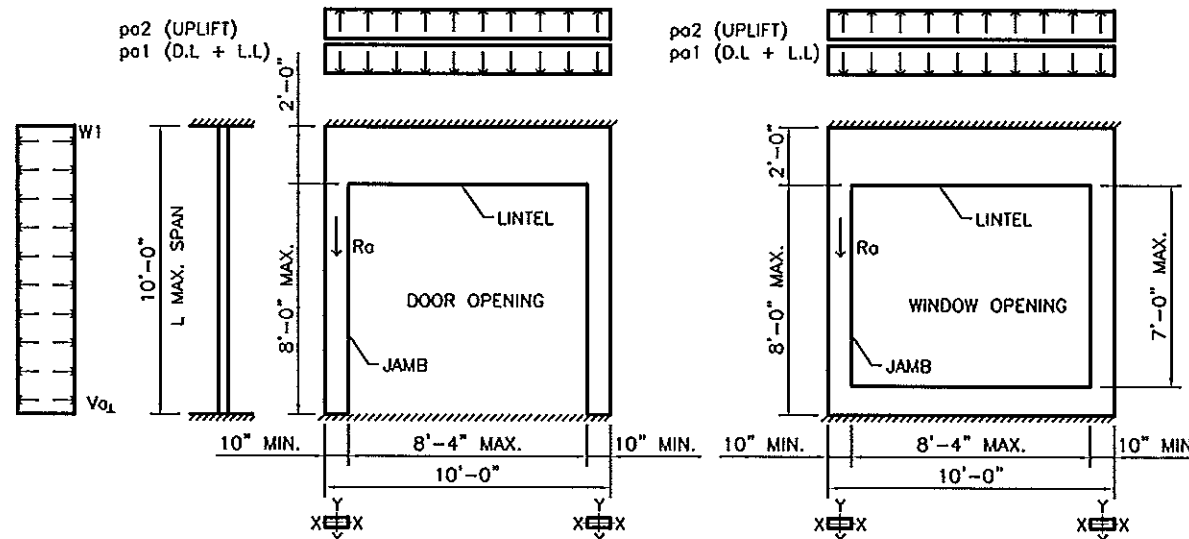
## COMPOSITE WALL PANEL

TABLE 1 - SOLID STRUC. CONC. FORM



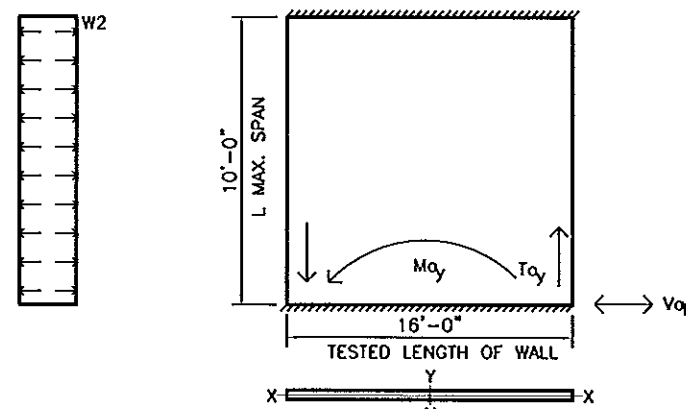
STRUCTURAL PROPERTY	VALUE	DESCRIPTION	REFERENCE
LMax	10'-0"	MAXIMUM CLEAR WALL HEIGHT	N / A
Max	701 lbs.-Ft./Ft.	ALLOWABLE BENDING MOMENT ABOUT X-AXIS DUE TO LOAD (WIND) $\perp$ TO WALL SURFACE (W1)	ASTM E330 F.B.C TAS 202-04 F.B.C TAS 201/203-04
V01	235 lbs./Ft.	ALLOWABLE SHEAR FORCE DUE TO LOAD (WIND) $\perp$ TO WALL SURFACE (W1)	ASTM E330 F.B.C TAS 202-04 F.B.C TAS 201/203-04
pa1	900 lbs./Ft.	ALLOWABLE AXIAL COMPRESSION FORCE (D.L + L.L.)	ASTM E72
pa2*	SEE NOTE BELOW	N / A	N / A
EIxx	$96 \times 10^6$ lbs./in. <sup>2</sup> x in. <sup>4</sup> /Ft.	EFFECTIVE MODULUS OF ELASTICITY AND MOMENT OF INERTIA FACTOR FOR DEFLECTION DUE TO (W1)	ASTM E330 F.B.C TAS 202-04

TABLE 2 - STRUC. CONC. FORM WITH DOOR OR WINDOW



LMax	10'-0"	MAXIMUM CLEAR WALL HEIGHT	N / A
Max	655 lbs.-Ft./10" COL. ELEMENT	ALLOWABLE BENDING MOMENT ABOUT X-AXIS DUE TO LOAD (WIND) $\perp$ TO WALL JAMB SURFACE (W1)	ASTM E330 F.B.C TAS 202-04 F.B.C TAS 201/203-04
V01	196 lbs./10" COL. ELEMENT	ALLOWABLE SHEAR FORCE DUE TO LOAD (WIND) $\perp$ TO WALL JAMB SURFACE (W1)	ASTM E330 F.B.C TAS 202-04 F.B.C TAS 201/203-04
pa1	900 lbs./Ft.	ALLOWABLE UNIFORM LOAD ON LINTEL	ACI 318-08
pa2*	SEE NOTE BELOW	N / A	N / A
Ra	4500 lbs.	ALLOWABLE REACTION ON JAMB	N / A
EIxx	$80 \times 10^6$ lbs./in. <sup>2</sup> x in. <sup>4</sup> /Ft. PER 10" COL. ELEMENT	EFFECTIVE MODULUS OF ELASTICITY AND MOMENT OF INERTIA FACTOR FOR DEFLECTION DUE TO (W1)	ASTM E330 F.B.C TAS 202-04

TABLE 3 - SOLID STRUC. CONC. FORM

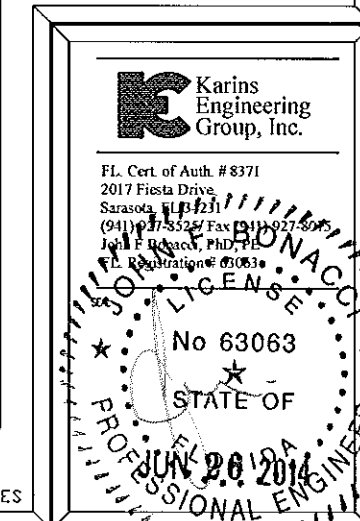


Lmax.	10'-0"	MAXIMUM CLEAR HEIGHT	N / A
V01	431 lbs./Ft.	ALLOWABLE SHEAR FORCE IN SHEAR WALLS PARALLEL TO THE PLANE OF THE WALL	ASTM E564 RACKING TEST
EIyy	$31390 \times 10^6$ lbs./in. <sup>2</sup> x in. <sup>4</sup> /Ft.	EFFECTIVE MODULUS OF ELASTICITY AND MOMENT OF INERTIA FACTOR FOR SHEAR WALL DEFLECTION	ASTM E564 RACKING TEST
Max	68863 lbs.-Ft.	ALLOWABLE BENDING MOMENT ABOUT Y-AXIS FOR 16' LONG WALL DUE TO LOAD W2 AS SHOWN	ASTM E564 RACKING TEST
Tay	1610 lbs.	ALLOWABLE TENSION ON EXTREME STUD IN SHEAR WALL	ASTM E564 RACKING TEST

\* WHERE AXIAL TENSION VALUES ARE REQUIRED, STUDS SHALL BE DESIGNED USING CONVENTIONAL CODE PROCEDURES. A CONTINUOUS LOAD PATH SHALL BE PROVIDED USING MECHANICAL CONNECTIONS. UPLIFT CONNECTIONS SHALL BE DESIGNED AND ACCOUNTED FOR BY THE SITE SPECIFIC ENGINEER OF RECORD.

TO THE BEST OF MY KNOWLEDGE AND ABILITY, THE COMPLETED STRUCTURE DEPICTED ON THESE PLANS COMPLIES WITH APPLICABLE MINIMUM BUILDING CODES

PRODUCT REVISED  
as complying with the Florida  
Building Code  
Acceptance No. 3-040205  
Expiration Date 06/26/2018  
By: [Signature]  
Miami Dade Product Control



Project Name:

STRUCTURAL CONCRETE FORM  
EFFICIENT BUILDING SYSTEMS, LLC  
2121 WHITFIELD PARK LOOP  
SARASOTA, FL 34243

Sheet Description:

WALL PROPERTIES

From: KC  
Object: JB  
SEC Ref: 07CS-0519  
Scale: AS NOTED  
Date: 06/19/2014

S-3